MHAA

Mid-Hudson Astronomical Association

January, 2013

Website: www.midhudsonastro.org

Yahoo Group: MHAstro

President : Willie Yee
Vice President: Joe Macagne
Secretary: Jim Rockrohr
Treasurer: Ken Bailey
Newsletter Editor: Rick Versace
Membership Coordinator: Caryn Sobel
Publicity: Paul Chauvet
Webmaster: Sean Dague
Parks Liaison:
College Liaison: Dr. Amy Forestell

Directors: Steve Carey, Dave Lindemann, Karl Loatman, & Tom Rankin

The meeting was called to order at 7:32pm

Minutes from the previous meeting were approved unanimously as submitted.

Officers reports

Ken Bailey (treasurer) reported a balance for the end of November $2828.78.

Treasurer's Report for the month of December

Date: 12 January, 2013

Bank Balance:	$2829.13
Outstanding Checks:	None
Outstanding Deposits:	$ 125.00
Ending Bank Balance:	$2954.13
Checkbook Balance:	$2953.78
Interest:	$ 0.35
Ending Checkbook Balance:	$2954.13
Balance with Bank: Yes	

Outstanding checks since end of month: None
Outstanding deposits since end of month: $125.00

Ending balance total: $2954.13
Notes: Outstanding deposits is from combination of 2012 and 2013 dues paid.

Respectfully submitted: Ken Bailey
Treasurer

Paul Chauvet (publicity) reported for publicity that The walkway advertised us and there was a big increase in our Facebook traffic because of that.

Candace Wall (outreach) reported on the walkway event as well and noted no upcoming outreach events.

Jim Rockrohr (membership) reported 62 paid members for 2012.

Old business

Ken Bailey showed us the shirts and hats from embroid-me.

Paul Chauvet suggested that we get our shirt and hat orders in at or before the January meeting.

Willie Yee gave a report on the club telescope repair. He noted that whoever borrows it may need instructions for the equitorial mount as it is difficult.

New Business

Officer elections

Sean read the slate for nominationsPresident: Willie Yee

- Vice President: Joe Macagne
- Treasurer: Ken Bailey
- Secretary: Jim Rockrohr
- Membership: Caryn Sobel
- Newsletter: Rick Versace
- Publicity: Paul Chauvet
- Outreach Coordinator: Candace Wall
- Webmaster: Sean Dague
- Guest Relations: Robert Paik
- Dark Sky Advocate: open

The slate of nominees were approved as presented. The club is still looking for volunteers for the open positions.

Sean asked if there were any objections about the proposed star party dates. A Motion was made to pay the $25 fee for Lake Taghkanic. It passed unanimously.

A discussion was had about our insurance policy and which locations should be covered. Lake Taghkanic and the Gardiner site we agreed to keep and Wilcox Park would be removed if it was not already. A motion approving such was passed unanimously.

Willie listed the next few meetings:

- Jan: Video - Big, Bigger, Biggest Telescopes
- Feb: Eric Myers - Peppercorn Model of The Solar System
- Mar: Raj Pandya - Smolen Planetarium's Digital Projector
- Apr: Bob Berman - Twenty Amazing Secrets of Celestial Motion
- May: Steven Bellavia - Large Synoptic Survey Telescope

The suggestion was raised to have our last speaker talk about the South Pole back again with better announcements and not around a holiday.

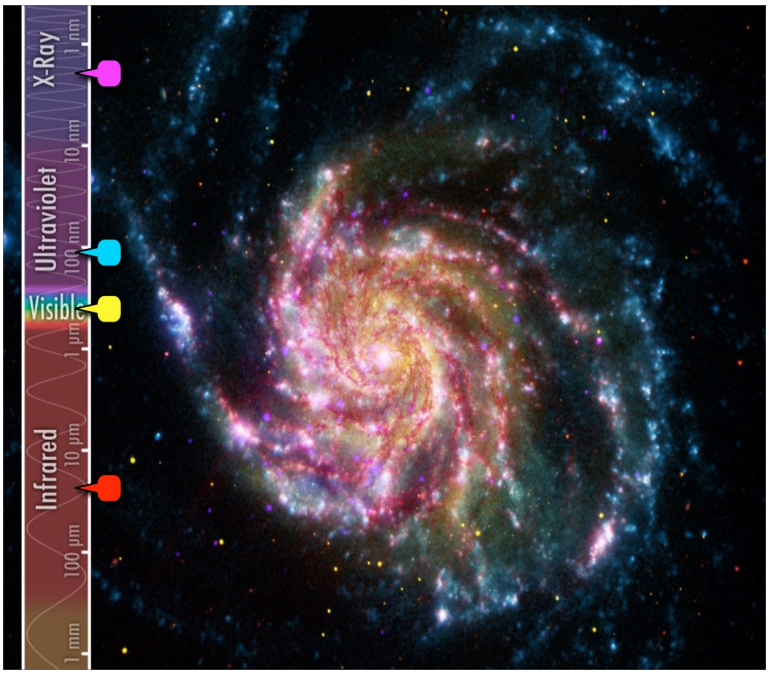
Willie began his talk at 8:07 with a video from the Star Trek Phase 2 group he's part of and followed up with a talk about Zhang Heng and other Chinese Astronomers. The official meeting was followed by the MHAA holiday celebration.

The Art of Space Imagery

By Diane K. Fisher

When you see spectacular space images taken in infrared light by the Spitzer Space Telescope and other non-visible-light telescopes, you may wonder where those beautiful colors came from? After all, if the telescopes were recording infrared or ultraviolet light, we wouldn't see anything at all. So are the images "colorized" or "false colored"?

No, not really. The colors are translated. Just as a foreign language can be translated into our native language, an image made with light that falls outside the range of our seeing can be "translated" into colors we can see.



Scientists process these images so they can not only see them, but they can also tease out all sorts of information the light can reveal. For example, wisely done color translation can reveal relative temperatures of stars, dust, and gas in the images, and show fine structural details of galaxies and nebulae.

Spitzer's Infrared Array Camera (IRAC), for example, is a four-channel camera, meaning that it has four different detector arrays, each measuring light at one particular wavelength. Each image from each detector array resembles a grayscale image, because the entire detector array is responding to only one wavelength of light. However, the relative brightness will vary across the array.

So, starting with one detector array, the first step is to determine what is the brightest thing and the darkest thing in the image. Software is used to pick out this dynamic range and to re-compute the value of each pixel. This process produces a grey-scale image. At the end of this process, for Spitzer, we will have four grayscale images, one for each for the four IRAC detectors.

Matter of different temperatures emit different wavelengths of light. A cool object emits longer wavelengths (lower energies) of light than a warmer object. So, for each scene, we will see four grayscale images, each of them different.

Normally, the three primary colors are assigned to these gray-scale images based on the order they appear in the spectrum, with blue assigned to the shortest wavelength, and red to the longest. In the case of Spitzer, with four wavelengths to represent, a secondary color is chosen, such as yellow. So images that combine all four of the IRAC's infrared detectors are remapped into red, yellow, green, and blue wavelengths in the visible part of the spectrum.

Download a new Spitzer poster of the center of the Milky Way. On the back is a more complete and colorfully-illustrated explanation of the "art of space imagery." Go to spaceplace.nasa.gov/posters/#milky-way.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Upcoming Speakers for 2013

January

Video – Big, Bigger, Biggest Telescopes

February

Eric Myers - Peppercorn Model of The Solar System

The peppercorn model is a scale model of the solar system which can demonstrate at the same time both the sizes of the planets and the distances between them. In the peppercorn model the Earth is roughly the size of a peppercorn placed about 26 yards from a bowling ball representing the Sun, and Pluto is a pin point about 1000 yards away. I'll show that the model fits well on both the SUNY New Paltz campus and on the Dutchess Rail Trail, and discuss other posible locations. I'll contrast the model used as an event versus a permanent installation, and discuss ways the club might promote the use of the model.

Eric Myers is a physicist trained in in high energy physics and cosmology and interested in astronomy. This year he is a visiting assistant professor of physics at SUNY New Paltz. He received his Ph.D. from Yale University and went on to do research at Brookhaven National Lab, Boston University, and the University of Texas. He has taught at the University of Michigan, Vassar College, and Marist College. He has given a talk to the club before, in January of 2009, about the prospects of detecting gravitational waves using data from LIGO and the distributed computing project known as Einstein@Home.

March

Raj Pandya – Smolen Planetarium's Digital Projector

April

Bob Berman - Twenty Amazing Secrets of Celestial Motion

May

Steve Bellavia - The LSST Camera: The heart and soul of the next generation survey telescope

TBA

Sue French – A few of My Favorite Things

Directions To The Star Party Site—

Lake Taghkanic State Park is in the town Ancram, NY. The park entrance is on the Taconic Parkway 10 minutes north of the exit used for Wilcox park.

Star Parties at Lake Taghanic are held in the West Parking log, next to the beach. The skies are darker than in Wilcox, with less stray light to deal with. The horizon is also much lower, especially to the south and east, making many more targets possible.

IMPORTANT: all events at Lake Taghkanic State Park require an **RSVP** which includes license plate number of the car you are bringing (please do so via Meetup). The park is patrolled by state police, and all non registered cars will be ticketted and risk our use of the park.

General Information:

- For the foreseeable future, all indoor meetings will be held on the 3rd Tuesday of each month in Coykendall Science Bldg., SUNY New Paltz (directions above) at 7:30 PM. All indoor events are FREE! All are welcome. The presentations are generally geared towards teenagers and up. For more information, call the Club Hotline.
- Dates listed for star parties are the primary dates. The rain date is the following night unless otherwise noted. Only one session is held for a given weekend, usually on the primary date, Friday, unless postponed (usually due to inclement weather) to the backup date, Saturday. Exceptions to this are noted in the "Scheduled Events" section above. Call the Club Hotline for updated information. Everyone should meet at the gate at the scheduled time. The gate will be closed after that time.
- All outdoor events are FREE! All are welcome. If you bring small children, it is **your** responsibility to keep a close eye on them. Please do not bring white-light flashlights. Instead, bring a red astronomer's flashlight or an ordinary flashlight covered with several layers of red cellophane. If in doubt about the weather, check the status of the event at www.midhudsonastro.org.